

KUFAREV, P. P.

2000

Kufarev, P. P. On the theory of univalent functions.
Doklady Akad. Nauk SSSR (N.S.) 57, 751-754 (1947).
(Russian)

The author gives a list of results too complicated to set down here, for certain special classes of univalent functions, without any indication of proofs or motivation. These results appear somewhat akin to Löwner's parametric representation of a class of univalent functions [Math. Ann. 89, 103-121 (1923)].
W. Seidel (Rochester, N. Y.)

Source: Mathematical Reviews,

Vol. No.

KUFAREV P.P.

Kufarev, P. P. On a system of differential equations.
Tomsk. Gos. Univ. Uchenye Zapiski 1948, no. 8, 61-72
(1948). (Russian)

2/20/0

Let $G(t)$, $0 \leq t < T$, be a one-parameter family of bounded schlicht domains, $G(t') \subset G(t)$, $t' > t$, which are obtained from some given initial polygonal domain $G(t_0)$ by prolonging a rectilinear slit $L(t)$ into the interior of $G(t)$. The origin $z=0$ is assumed to lie in the interior of each domain $G(t)$, and the function which maps $|w| < 1$ onto $G(t)$ is denoted by $z = \phi(w, t)$, $\phi(0, t) = 0$, $\phi'(0, t) > 0$. The author applies the method of Löwner to obtain differential equations for the parameters which occur in the Schwarz-Christoffel formula for $\phi(w, t)$. D. C. Spencer.

Source: Mathematical Reviews,

Vol. No.

Saw
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Vinogradov, Yu. P., and Kufarev, P. P. On a problem of filtration. Akad. Nauk SSSR. Prikl. Mat. Mech. 12, 191-198 (1948). (Russian)

The following problem is considered. In an incompressible fluid, which fills some two-dimensional region G , that varies with time t , there exists at a point $z=0$ an outflow of magnitude $2\pi g(t)$ which changes with time. The velocity potential is assumed to be constant on the boundary C , of G during some interval of time. It is required to determine the nature of the motion and the shape of the region G , if the region G_0 occupied by the fluid at time $t=0$ is given. On the basis of the results of P. J. Polubarinova-Kochina [Appl. Math. Mech. [Akad. Nauk. SSSR. Prikl. Mat. Mech.] 9, 79-90 (1945); C. R. (Doklady) Acad. Sci. URSS (N.S.) 47, 250-254 (1945); these Rev. 7, 95, 140], and L. A. Galin [C. R. (Doklady) Acad. Sci. URSS (N.S.) 47, 246-249 (1945); these Rev. 7, 229] this problem is reduced to the solution of a system of integro-differential equations. A study of these equations permits the authors to draw certain conclusions on the existence and nature of the solution of a boundary value problem to which the present problem had been reduced by Polubarinova-Kochina and to develop two methods for the solution of the problem. H. P. Thielman (Ames, Iowa).

Source: Mathematical Reviews,

Vol 7 No 9

KUFAREV, P. P.

Kufarev, P. P. A solution of the boundary problem for an oil well in a circle. Doklady Akad. Nauk SSSR (N.S.) 60, 1333-1334 (1948). (Russian)

The author considers the flow of oil in a unit circle in the presence of a single well inside the circle. The analysis is based on the following theorem. Let $\alpha(t)$, $\beta(t)$, $A_k(t)$, $a_k(t)$ be the solutions of the system of equations

$$\beta\dot{\beta} - \sum_{k=1}^n \dot{A}_k \beta / a_k^2 = D_1 - 2\alpha, \quad \alpha - \sum_{k=1}^n A_k / a_k = D_2,$$

$$\alpha + \beta / a_k - \sum_{k=1}^n A_k a_k / (a_k a_k - 1) = C_1,$$

$$\dot{A}_k \beta / a_k^2 - \sum_{k=1}^n \dot{A}_k A_k / (a_k a_k - 1)^2 = C_2',$$

where D_1 , D_2 , C_1 are constants and $a_k > 1$; then the function

$$z = \beta W + \alpha + \sum_{k=1}^n A_k / (W - a_k)$$

satisfies the boundary condition

$$\omega^{-1/2} z'(\omega, t) z'(\omega^{-1}, t) + \omega z'(\omega^{-1}, t) z'(\omega, t) = -2, \quad \omega = e^{it}$$

A. W. Baldyreff (Albuquerque, N. M.)

Somed

Phys Tech Inst, Tomsk State Univ.

Source: Mathematical Reviews.

Kufarav, P.P.

Kufarav, P. P. On conformal mapping of complementary regions. Doklady Akad. Nauk SSSR (N.S. 73, 881-884, 1950). (Russian)

200

Let z_1 and z_2 denote two distinct fixed points in the circle $|z| < R$ and let Γ be an arbitrary Jordan arc which decomposes $|z| < R$ into two regions B_1 and B_2 such that z_1 lies in B_1 and z_2 in B_2 . Denote by $z = f(\zeta)$ the function which maps the unit circle $|\zeta| = 1$ onto the region B_k , $k = 1, 2$. Setting $f(\zeta_1) = z_1$, $f(\zeta_2) = z_2$, it is required to find that arc Γ for which $|f'(\zeta)|$ attains a maximum. This problem was proposed by M. A. Lavrent'ev [Izv. Inst. Math. Stekloff 3, 159-245 (1934)]. The maximum is attained if Γ is the non-Euclidean line in the circle $|z| < R$ which bisects orthogonally the non-Euclidean segment which connects the two points z_1 and z_2 . The author solves this problem by the method of parametric representations, based on Löwner's differential equation.

W. Seidel (Rochester, N. Y.).

Source: Mathematical Reviews,

Vol. 12, No. 6

Smul

KUFAREV, P.P.

Kufarev, P. P. Solution of a problem on the contour of the oil-bearing region for lodes with a chain of gaps. Doklady Akad. Nauk SSSR (N.S.) 75, 353-355 (1950). (Russian)

Soit $|\Omega_t| < \infty$ une bande infinie représentant l'état initial d'un gisement pétrolier. Cette bande porte une suite infinie des puits d'exploitation équidistante (abscisse $= 2n\omega_1$, $n = 2m+1$) à débit $2\alpha_0(t)$ égal pour tous les puits. L'auteur étudie la variation des limites de ce gisement en se servant des fonctions elliptiques de Weierstrass $p(u; 2\omega_1, 2\omega_2)$, $\zeta(u)$, $\sigma(u)$ pour obtenir la représentation conforme de l'état initial du gisement sur son état au moment t . En désignant par z la variable complexe dans cette région on a la transformation cherchée sous la forme $z = \beta(t)u + A(t)\zeta(u - \omega_1) + A(t)\eta_1$, les fonctions $\beta(t)$, $A(t)$, $\eta_1 = \zeta(\omega_1)$ étant des solutions de certaines équations différentielles ordinaires.

V. A. Kostuzin (Paris).

Source: Mathematical Reviews,

Vol. 12 No. 8

KUFAREV, P. P.

Kufarev, P. P. This problem of the contour of the oil-bearing region for a circle with an arbitrary number of gaps. Doklady Akad. Nauk SSSR (N.S.) 75, 507-510 (1950). (Russian)

Dans un précédent article [mêmes Doklady (N.S.) 60, 1333-1334 (1948); ces Rev. 10, 241] l'auteur a donné une solution du problème de la réduction du contour d'un gisement pétrolière dans le cas de forme initiale circulaire et d'un seul puits d'exploitation. L'auteur donne actuellement une généralisation de ses résultats en supposant le nombre des puits et leur distribution sur la surface arbitraires. Dans ce but il utilise la représentation conforme de l'état initial sur l'état du gisement au moment t . La solution a la forme $z = \beta(t)w + \alpha(t) + \sum_{i=1}^n \lambda_i(t)/(w - \alpha_i(t))$, les fonctions $\alpha_i, \beta, \lambda_i$ étant solutions d'un système d'équations algébrique. Dans le cas particulier de disposition symétrique des puits d'égale puissance la solution se calcule facilement.

V. A. Kostitsin (Paris).

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Source: Mathematical Reviews. Vol. No.

KUFAREV, P. P.

Among the papers presented by the First All-Union Conference on Aerohydrodynamics (8-13 Dec 1952) convened by the Institute of Mechanics, Academy of Sciences USSR, was:

"Meromorphous Solutions of the Problem of Shifting of Contours of Oil-Bearing Beds" by Kufarev, P. P. (Phsicotechnical Institute, Tomsk State University)

SO: Izvestiya AN USSR, Otdeleniye Tekhnicheskikh Nauk, No. 6, Moscow, June 1953, (W-30662, 12 July 1954)

УФЕНР, 7.1

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Mathematical Reviews
Vol. 14 No. 7
July - August, 1953
Mechanics.

✓Kufarev, P. P. On free-streamline flow about an arc of a circle. Akad. Nauk SSSR, Prikl. Mat. Meh. 16, 589-598 (1952). (Russian)

L'A. présente une nouvelle solution du problème déterminé du sillage plan, symétrique, posé en fluide indéfini relativement à un arc de cercle. La méthode est fondée implicitement sur l'analyticité de la correspondance $z = z(t)$, $t = \sqrt{f}$ (ou f est le potentiel complexe) le long de l'image de l'obstacle. La question est ramenée à une équation intégrale différentielle singulière que l'A. résout par approximations successives. Le processus est convergent et la solution unique pour de petites valeurs de l'angle au centre du profil. Il est à noter — et c'est un point important — que la méthode fournit des solutions approchées qu'il serait intéressant de comparer avec celles que donnent les procédés habituels.

Il semble que le présent mémoire apporte une idée nouvelle — sans doute, de faible portée — qui mérite d'être étudiée en détail.

J. Kravtchenko (Grenoble).

KUFAREV, P.P.; SEMUKHINA, N.V.

On a problem of N.N.Lusin. Usp.mat. nauk 9 no.4:183-185 '54.
(Conformal mapping) (MLRA 8:1)

KUFAREV, P. P.

USSR/Mathematics - Coefficient problem

Card : 1/1

Authors : Kufarev, P. P.

Title : A property of extreme zones of the coefficient problem

Periodical : Dokl. AN SSSR, 97, Ed. 3, 391 - 393, July 1954

Abstract : Proves the following theorem: Let $G_z(\tau)$ be an arbitrary arc of the G boundary of the extreme zone B connecting points z_0 and $z(\tau)$. Let $G_{z_0}(\tau)$ be a zone obtained by cutting a plane along the $G_{z_0}(\tau)$. Then, the function $\omega = F(z, \tau)$, where $F(0, \tau) = 0$ and $F_2(\partial, \tau) = e^{-\tau}$, which maps $G_{z_0}(\tau)$ on $|\omega| < 1$, will satisfy the following differential equation :

$$\left(\frac{z}{F} \cdot \frac{\partial F}{\partial z} \right)^2 = \frac{\Lambda(z)}{B(F, \tau)} . \text{ Two references.}$$

Institution : V. V. Kuybyshev State University in Tomsk

Presented by : M. A. Lavrent'ev, Academician

Notations, P. P.

Call Nr: AF 1108825

Transactions of the Third All-union Mathematical Congress * (Cont.) ^{MOSCOW}
Jun-Jul '56, Trudy '56, V. 1, Sect. Rpts., Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp.
There is 1 USSR reference. ₈₂₋₈₃

Zukhovitskiy, S. I. (Kiyev). On a Minimum Problem of the
Problem of Moments. 83-84

There is 1 German reference.

Kaz'min, Yu. A. (Zernovoy). On Complete Systems in
Hilbert Spaces. 84-85

There are 2 references, 1 of which is USSR, and the
other German.

Kozmanova, A. A. (Sverdlovsk). The Theorem of Polya for
Entire Functions of Two Complex Variables 85

Kufarev, P. P. (Tomsk). On the Method of Parametric
Representation and G. M. Goluzin Variational Method. 85-86

Card 26/80

SUBJECT USSR/MATHEMATICS/Theory of functions CARD 1/1 PG - 351
 AUTHOR KUFAREV P.P., SEMUCHINA N.V.
 TITLE On the extension of the variation method of G.M.Golusin on
 doubly connected domains.
 PERIODICAL Doklady Akad. Nauk 107, 505-507 (1956)
 reviewed 10/1956

Golusin's method (Mat. Sbornik 19, 203 (1946); *ibid.* 21, 83 (1947)) for the computation of the extremal problems for functions being one-sheeted in a simply connected domain is extended to functions being one-sheeted in a ring domain. Two theorems are formulated without proof: If the boundaries of the doubly connected domains $G(t)$ ($t_0 - a < t < t_0 + a$) satisfy certain conditions and $w = F(z, t)$ maps the domain $G(t)$ conformally onto the ring $r(t) < |w| < R(t)$, where $R(t)$ is differentiable in $t = t_0$ and there exists $\left. \frac{\partial \arg F(z, t)}{\partial t} \right|_{t=t_0}$, then there also exists $\left. \frac{\partial \phi(w, t)}{\partial t} \right|_{t=t_0}$, where $z = \phi(w, t)$ is the function being inverse to $F(z, t)$. Here $\left. \frac{\partial \phi}{\partial t} \right|_{t=t_0}$ satisfies a rather complicated relation. The second theorem gives the generalization of Golusin's formula for doubly connected domains.

INSTITUTION: University, Tomsk.

KUFAROV, P.P.

Method of investigation of extremum problems in the theory of
Schlicht functions. Dokl.AN SSSR 107 no.5:633-635 Ap '56. (MLRA 9:8)

1. Tomskiy gosudarstvennyy universitet imeni V.V. Kuybysheva.
Predstavleno akademikom M.A. Lavrent'yevym.
(Functions of complex variables)

KUFAREV, P.P.

Problem connected with a vortex and source under the surface of a fluid. Trudy TGU 144:31-44 '59. (MIRA 13:6)

1. Kafedra matematicheskogo analiza Tomskogo gosudarstvennogo universiteta im. V.V. Kuybysheva.
(Fluid dynamics)

KUFAREV, P.P., prof., red. vypuska; OSOVSKIY, A.T., tekhn. red.

[Transactions of the Scientific Conference on Problems of
Theoretical and Applied Mathematics and Mechanics] Doklady
Nauchnoi konferentsii po teoreticheskim i prikladnym vopro-
sam matematiki i mekhaniki, 1960. Tomsk, Izd-vo Tomskogo univ.,
1960. 126 p. (MIRA 14:11)

1. Nauchnaya konferentsiya po teoreticheskim i prikladnym vopro-
sam matematiki i mekhaniki, 1960.
(Mathematics—Congresses) (Mechanics—Congresses)

KUFAREVA, O. Docent

"Problem of the Functional Status of Human Duodenum," Klin. Med., 26, No.7,
1948.

Maj., Med. Corps. Hosp. Therapeutics Clinic, Naval Med. "cad.

1. KUFAROVA, O.
2. USSR 600
4. Physicians
7. Nikolai Ivanovich Leporskii, 1877-1952, Zhur vys. nerv. deiat, 2, No. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

KUFAREVA, O.P. (Leningrad); LANDA, A.I. (Leningrad)

Study of the functional state of the higher sections of the central nervous system in diseases of internal organs. Klin. med. 31 no.11: 7-17 N '53.
(MLBA 6:12)
(Nervous system)

KUFAREVA, O.P.; STEFANOVSKAYA, F.G.

Changes in the functional state of cortical centers of vision
in hypertensive patients during treatment with hypotensive drugs.
Vest.LGU 14 no.3:141-145 '59. (MIRA 12:5)
(VISION) (ERGOTOXINE) (RAUWOLFIA)

18(5), 25(1)

SOV/135-59-8-14/24

AUTHOR: Kufel'd, L.T., Engineer

TITLE: Modernization of Spot-Welder of Type ATP-25 for Welding Reinforcements

PERIODICAL: Svarochnoye proizvodstvo, 1959, Nr 8, pp 39-40 (USSR)

ABSTRACT: Searching for more efficient working methods to weld reinforcement constructions the mechanic Ye.R. Moor of the Korkinsky plant for reinforced concrete products modernized the spot-welder of type ATP-25; it is now possible to weld reinforcements of small and large dimensions without an additional bridging of the joints and to weld different types of reinforcements without switching the machine. The construction of the spot-welder: all mechanical and electric joints were installed inside the frame. The top part of the machine consists of the table which serves as a working area during the welding. In the initial position both arms are below the level of the table. The rotation axle of the moveable arm is fastened to an adjustable, hanging lever fork, which is inside the frame. By re-

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SOV/135-59-8-14/24

Modernization of Spot-Welder of Type ATP-25 for Welding Reinforcements

ducing the height of the machine it was made more compact and more efficient. A detailed description of the frame follows. On the frame are fastened: the welding transformer (6) with a power of 25 KVA and a step-throw-over switch, the pressing mechanism (7-13), the lower arm (14), which is fastened on the frame over the insulations, the upper arm (15) which is an integral part of the pressing mechanism, the mechanical switch (16), and the electrodes (17) with conical ends, which are fitted into the conical holes in the arms. The welding cycle takes place in the following way: when the pedal is pressed the two electrodes move towards the reinforcement piece until they touch it. Then the mechanical switch is contacted, and the welding begins. When the spot is formed the contact switch is turned off and the pressure is taken off the electrodes. One of the most important changes from the original machine of type Atp-25 concerned the construction of its adjustable arm. In the welding the arm goes through a combined motion - first the motion

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SOV/135-59-8-14/24

Modernization of Spot-Welder of Type ATP-25 for Welding Reinforcements

is radial and then changes into a straight one. When the pedals (13) are pressed the two connected levers start moving; these levers are on the one end connected with the lever joint and on the other one with the bolt (10). The bolt with the set-up spring is connected with the bracket (11). When the lever (9) is moved downwards the fork (8) swings out. It is joint with the compensating lever by a hinge. The final pressure on the electrodes and the switching device are produced by increasing the pressure on the pedal as far as possible. The adjustable arm in this case moves straight down because of the pressure of the springs (18) and (19). The change from the radial to the straight motion is effected by reducing the motion of the upper arm with the chain (20), which is connecting the lever (9) with the fork (8). The springs which support the compensating lever are fixed on bolts, which are insulated from the frame, and which are designed to let the compensating lever return into its original position. The return of the pressing mechanism and

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Modernization of Spot-Welder of Type ATP-25 for Welding Reinforcements

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the switching-off of the current are carried out by the spring (12). The organization of the reinforcement process was also changed to perfect the machine. Additional devices were developed for constructions of large dimensions. The frame of the machine and its cover form an angle of 45°. With this machine it is possible to weld reinforcements with meshes of at least 80x80 mm. The modernized machine has an effect of 10 spots a minute. It is intended to be used mainly in the production of reinforcements of a breadth of more than 50 cm, which used to be built in 2 or 3 parts. The possibility to produce complicated and differently shaped reinforcements with this machine raised its efficiency from 60 to 90%. There are 2 diagrams.

ASSOCIATION: Korkinskiy zavod zhelezobetonnnykh izdeliy (Korkinskiy Plant for Reinforced Concrete Products)

Card 4/4

MALYARENKO, A.V.; KOMAROVSKIY, I.Ye.; KUFERSHTEYN, Ye.S.

Use of the WGr-52 lacquer in the Malino factory of bent furniture. Bun. 1 der. prom. no.3:38-40 JI-S '65. (MIRA 18:9)

KUFFER, A., inz.; MAHDALIK, M., inz., CSc.

"Wood utilization by chemical processing" by W. Sandermann.
Reviewed by A. Kuffer, M. Mahdalik. Papir a celuloza 18 no.9:
194 S '63.

1. Vyskumny ustav papieru a celulozy (for Kuffer).
2. Slovenska akademia vied (for Mahdalik).

KUFFER, Alfred

New information on the carboxymethyl cellulose. Chem listy 56
no.12:1420-1433 D '62.

1. Vyskumny ustav papieru a celulozy, Bratislava.

KUFFER, Alfred, inz.

Evaluation of the test results in the pulp and paper
manufacture. Papir a celuloza 19 no.4:107-112 Ap '64.

1. Research Institute of Paper and Cellulose, Bratislava.

KUFFER, Alfred; MANDALIK, Miroslav

Use of polysaccharide substances of wood. Drevo 17 no.12:
355-358 D '62.

1. Vyskumny ustav papieru a celulozy (for Kuffer). 2. Chemicky
ustav, Slovenska akademia vied, Bratislava (for Mandalik).

KUFLEVSKIY, Ye.I.

Selective transistorized RC amplifier with direct coupling.
Radiotekhnika 16 no.9:24-33 S '61. (MIRA 14:9)

1. Deystvitel'nyy chlen Nauchno-tekhnicheskogo obshchestva
radiotekhniki i elektrosvyazi im. A.S. Popova.
(Transistor amplifiers)

KUFLEVSKIY, Ye.I.

Analysis of a selective amplifier with detuned double T-shaped bridge
in the feedback loop. Elektrosviaz' 16 no.6:22-32 Je '62.
(MIRA 15:6)

(Amplifiers (Electronics)) (Radio--Receivers and reception)

KUFLEWICZ, A.; RYTEL, M.

Constants of force of hydrogenated compounds of the H_2X type of oxygen, sulfur, and selenium. Acta physica Pol 21 no. 5:445-449 My '62.

1. Chaire de Physique de l'Ecole Supérieure d'Agriculture, Szczecin; actuellement Ecole Polytechnique Supérieure, Rzeszow.

L 17994-66

ACC NR: AP6006401

SOURCE CODE: UR/0413/66/000/002/0144/0145

INVENTOR: Venikov, V. A.; Kuflik, A. A.; Kozyrev, V. A.

ORG: none

TITLE: Device for automatically coupling and uncoupling hoses. Class 47, No. 178251

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1966, 144-145

TOPIC TAGS: oxygen supply line, coupling, aircraft oxygen supply

ABSTRACT: The proposed device, which can be used, for example, for oxygen supply lines in aircraft ejection seats contains two connecting elements, with an orienting cone and a seal. To ensure hermetic coupling and uncoupling of the hoses when they are not coaxially aligned, one of the connecting elements is secured in brackets; one element has a receiving, conical connecting sleeve with a directional funnel and

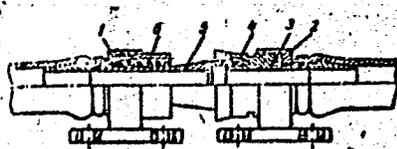


Fig. 1. Hose coupling

1, 2 - Brackets; 3 - fixed connecting sleeve; 4 - sealing collar; 5 - movable connecting tube; 6 - spring.

Card 1/2

UDC: 621.643.416

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L 17994-66

ACC NR: AP6006401

an elastic sealing collar, and the other, a movable conical connecting tube, which is forced against the sealing collar by a spring (see Fig. 1). Orig. art. has:
1 figure.

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SUB CODE: 21/ SUBM DATE: 26Mar63/ ATD PRESS: 4213

Card

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Р.А. Купман
KUFMAN, R.A.; SHISHANOV, V.L.; KHLOPKIN, P.A.

Apparatus for dyeing on bobbin and beams. Tekst.prom.8 no.2:25-26
F '48. (MLRA 8:11)

(Dyes and dyeing--Apparatus)

L 04279-67 EWT(m)/T/EWP(t)/ETI IJP(c) JD/DJ

ACC NR: AP6013256

SOURCE CODE: UR/0413/66/000/008/0045/0045

AUTHORS: Kufman, Ya. I.; Rostik, G. V.

42
B

ORG: none

TITLE: Face coupling of a shaft in a turbogenerator with ²⁷hydrogen cooling. Class 21, No. 180683

SOURCE: Izobreteniya, promyshlennyye obratzys, tovarnyye znaki, no. 8, 1966, 45

TOPIC TAGS: turbine design, turbine engine, engine turbine system, *SHAFT*

ABSTRACT: This Author Certificate presents a shaft face coupling in a turbo-generator with hydrogen cooling, after Author Certificate No. 130098. To improve the efficiency, the working surface of the insert carries guides placed at an angle to the radius, serving to deflect the flow of oil in the radial direction. These guides may either have the form of protrusions or of grooves running at an angle to the radius.

SUB CODE: 13/ SUBM DATE: 05Mar65

Card 1/1

UDC: 62-762.84:621.313.322-81-712

KUFNER, Alois; JARNIK, Jiri

"Differential equations and their applications." Reviewed
by Alois Kufner, Jiri Jarnik. Aplikace mat 9 no.4:310-312 '64.

KUFNER, J.

Czechoslovakia /Microbiology. Medical and Veterinary F-6
Microbiology.

Abs Jour: Referat. Zh.-Biol., No. 9, 1957, 35808

Author : Citta, A.: Kufner, J.

Title : Treatment of the Jaw Form of Actinomycosis With
Terramycin

Orig Pub: Vojenske zdravetn. listy, 1956, 25, No. 9,
Priloha No. 3, 30-33

Abstract: No abstract.

Card 1/1

KUFNER, Josef, CSc, MUDr.

Transplantation in stomatology. Sborn. ved. prac. lek. fak.
Karlov. Univ. (Hrad. Kral.) 6 no.3:Supplement:349-358 '63.

1. Prednosta stomatochirurgickeho pododdeleni Ustredni
vojenska nemocnice, Praha-Stresovice.

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61381

Z/038/60/000/03/02/007

21.2200

AUTHORS: Chochlovský, Igor; Kufner, Vladimír and Nový, František

TITLE: Laboratories for the Van de Graaff Accelerator at the Institute of Nuclear Research, ČSAV

PERIODICAL: Jaderná energie, 1960, No. 3, pp. 80 - 82

TEXT: In addition to a nuclear reactor and a cyclotron, the Ústav jaderného výzkumu ČSAV (Institute of Nuclear Research, ČSAV) in Řež near Prague will receive a vertical-type, 5Mev Van de Graaff accelerator, contained in a pressure vessel (Ref. 1, 2). The building for the accelerator and its laboratories is nearing completion. A sectional diagram of the accelerator with several technical data is shown in Figure 5 with the following legend: 1. Accelerator proper (5 Mev, 100 μ A), contained in a pressure vessel (volume 23.5 m³, height 8,000 mm, diameter 2,000 mm, pressure 15 atm); 2. High-voltage electrode; 3. Ion accelerating tube; 4. electron tube for voltage stabilization; 5. Evacuating system for the ion tube with a diffusion vacuum pump (4,000 liters/second); 6. Evacuating system for the electron tube with a diffusion pump 2,000 liters/second (used also for uninterrupted evacuation of both tubes); 7. Mobile auxiliary evacuating station; 8. Target; 9. Magnet for the deflection and separation of the accelerated beam of particles;

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Z/038/60/000/03/02/007

Laboratories for the Van de Graaff Accelerator at the Institute of Nuclear Research, CSAV

10. Tank for pressurized insulating gas; 11. Equipment for filling and drying the insulating gas (a mixture of N and CO₂), pressure 15 atm; 12. High-voltage source for charging the conveyor belt of the generator; 13. Electron source for stabilization of the accelerating voltage level. The entire equipment was designed and produced in the CSR, with the ÚJV, Chemoprojekt, Závody V.I. Lenina (V.I. Lenin Works) in Plzeň participating in the project. The accelerator building is located at a considerable distance from other installations of the Institute and consists of 2 main sections: one housing the accelerator and the other housing the laboratories. The entire building has a total volume of about 9,000 m³. A drawing of the building is shown in Figure 1, a longitudinal vertical section through the building is shown in Figure 2, a floor plan is shown in Figure 3 and a transversal vertical section of the laboratory wing is shown in Figure 4. The accelerator room has external dimensions of 16x13 m, 2 floors (ground floor and basement) with a total height of 26 m. Up to a height of 8 m the walls are of concrete, 100 cm thick, furnishing a reliable protection against radiation. The partition wall between the accelerator room and the laboratory wing is of 60-cm thick limonite concrete. The ground floor is divided by a concrete wall into a

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Z/038/60/000/03/02/007

Laboratories for the Van de Graaff Accelerator at the Institute of Nuclear Research ČSAV

room in which the accelerator is installed, and into an engine room with an elevated platform onto which the accelerator electrodes and pressure vessel can be deposited during repairs. For handling the heavy parts of the accelerator, the room is equipped with a 16 ton bridge crane. The basement contains a large, partially partitioned target room. For better work with direct targets, a 4x4 m section of the floor located immediately below the accelerator has been lowered by 2 m. An experimental channel, 3.2 m high, 1.5 m wide, leads out of the target room in the direction of the axis of the accelerating tube. The channel proceeds below the laboratory wing, ending outside of the building. The accelerator room is connected with the basement and the ground floor of the laboratory wing with sliding double-wall steel doors filled with limonite concrete. The laboratory wing has a combined brick and concrete frame with prefabricated ceilings. Its external dimensions are 18x15m, the overall height being 13 m. It has 3 floors containing a control room, switch rooms, a workshop, laboratories and offices of the operating and scientific personnel. Water and sewage pipes, compressed air pipes, electric and communication

4

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Laboratories for the Van de Graaff Accelerator at the Institute of Nuclear Research ČSAV

wiring are installed in accessible horizontal and vertical channels interconnecting all rooms of the building. (Editor: M. Weber) There are 2 photographs, 5 diagrams and 2 Czech references.

ASSOCIATION: Chemoprojekt, Prague (Chochlovský, Igor; Kufner, Vladimír); ÚJV ČSAV, Prague (Nový, František).

✓

Card 4/4

KUFSHINSKIY, YE. V.

P. P. Kobeko, Ye. V. Kufshinskiy and A. S. Semenova,

"Molecular Weights of Polystyrenes Obtained at Pressures Up to 6,000 kg/cm² ",
Journal of Physical Chemistry, 24, 415-419, April 1950, Leningrad.

ABSTRACT AVAILABLE

D-50058

KUFSHINSKIY, Ye. V.

Ye. V. Kufshinskiy and A. S. Semenova

"Dilatometric Method for the Investigation of the Polymerization Kinetics at High and Extremely High Pressures", *Journal of Physical Chemistry* 24, 420-426, April 1950, Leningrad, Polytechnical Kalinin Institute and Physical-Technical Institute of the Academy of Sciences, USSR.

ABSTRACT AVAILABLE

D-50054

KUFTIN, A.

Device for cleaning water collecting headers. Sovshakht. 10
no.11:25 N '61. (MIRA 14:11)
(Coal mines and mining--Equipment and supplies)

KUFTIN, A.

Preventing accidents. Sov.shakht. 11 no.1:29 Ja '62.
(MIRA 14:12)
(Hoisting machinery--Safety appliances)

BELKIN, S.I.; KUFTIN, P.P.; SEDLOVSKIY, N.F.

Readers' response to A.A.Molchanov's and D.M.Iukhtanov's article
"Efficient use of copper and copper-zinc pyrite ores." TSvet.
met. 33 no.10:87 0 '60. (MIRA 13:10)
 (Copper ores) (Ore dressing)
 (Molchanov, A.A.) (Iukhtanov, D.M.)

KUFTIN, P.P.

Flowsheets and structural design of ore dressing plants. Obog. rud
6 no.1:62 '61. (MIRA 14:8)

1. Sibayskaya obogatitel'naya fabrika.
(Ore dressing)

BONDAR', Mikhail Pavlovich; LOPATA, Aleksandr Yakovlevich; ORLIKOV,
Mikhail L'vovich; KUPTURSKIY, I.I., inzh., retsenzent; KORSHUNOV,
V.V., retsenzent; LEUTA, V.I., inzh., red.; SOROKA, M.S., red.

[Automatic and semiautomatic lathes] Tokarnye avtomaty i polu-
avtomaty. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry,
1959. 450 p. (MIRA 12:5)

(Lathes)

KUFTYREVA, Valentina Alekseyevna; KUFTYREVA, Natal'ya Sergeyevna;
SHUSTOVA, I.B., red.; NAZAROVA, A.S., tekhn.red.

[Minerals and methods of searching for them] Poleznye isko-
paemye i metody ikh poiskov. Moskva, Izd-vo "Znanie," 1961.
37 p. (Narodnyi universitet kul'tury. Estestvennonauchnyi
fakul'tet, no.30) (MIRA 15:4)
(Mines and mineral resources)
(Prospecting--Geophysical methods)

KUFTYREVA, Nataliya Sergeyevna; SHIBANOVA, A.A., red.; CHUVALDIN, A.M.,
red. kart; KOVALENKO, V.L., tekhn. red.

[Practical work on the physical geography of the U.S.S.R.]
Prakticheskie raboty po fizicheskoi geografii SSSR; dlia
estestvenno-geograficheskikh i geograficheskikh fakul'tetov
pedinstitutov. Moskva, Uchpedgiz, 1962. 73 p.

(MIRA 16:4)

(Physical geography)

KUFTYREVA, Valentina Alekseyevna; KUFTYREVA, Natal'ya Sergeyevna;
SHUSTOVA, I.B., red.; NAZAROVA, A.S., tekhn.red.

[Minerals and methods of searching for them] Poloznye isko-
paemye i metody ikh poiskov. Moskva, Izd-vo "Znanie," 1961.
37 p. (Narodnyi universitet kul'tury. Estestvennonauchnyi
fakul'tet, no.30) (MIRA 15:4)
(Mines and mineral resources)
(Prospecting—Geophysical methods)

SHIROKOV, V.I., red.; VIL'CHINSKAYA, L.P., red.; NOVIKOVA, A.M., red.;
KUFTYREVA, Z.I., red.; DONETS, Ye.P., red.; KASTRYKINA, M.A.,
red.; DOLMATOVA, A.S., red.; BENEVOLENSKIY, I.I., red.;
BOL'SHAKOVA, N.L., red.; BELYAKOV, P.V., red.; BADINA, L.S.,
tekhn. red.

[The economy of Ivanovo Province; statistical abstract] Narod-
noe khoziaistvo Ivanovskoi oblasti; statisticheski sbornik.
Ivanovo, Gosstatizdat, 1962. 227 p. (MIRA 16:6)

1. Ivanovo (Province) Statisticheskoye upravleniye. 2. Na-
chal'nik Statisticheskogo upravleniya Ivanovskoy oblasti (for
Belyakov). 4. Statisticheskoye upravleniye Ivanovskoy oblasti
(for all except Badina).

(Ivanovo Province--Statistics)

SHEVCHUK, I.P., kand.ekon.nauk, dots.; MAKARENKO, P.P., kand. ekon. nauk;
STAROVEROVA, V.V., kand.ekon. nauk; KUFUDAKI, V.I., assistant;
LEMESHENKO, D.D., assistant; PUSHKO, D.S., kand.ekon. nauk; PILENKO,
I.F., kand. ekon. nauk; PEREL'BERG, I.L., starshiy prepodavatel';
BOL'FOY, G.T.; KACHANOVA, N., red.; GORYACHENKO, F., tekhn. red.

[Business accounting within individual production units in operation; practice in introducing business accounting in individual production units of the V.I.Lenin Collective Farm, Bendery District] Vnutrikhoziaistvennyi raschet v deistvii; opyt vnedrenia vnutrikhoziaistvennogo rascheta v kolkhoze im. V.I.Lenina Benderskogo raiona. Kishinev, Izd-vo sel'khoz.lit-ry MSKh MSSR, 1962. 211 p. (MIRA 15:6)

1. Zaveduyushchiy kafedroy ekonomiki i organizatsii sotsialisticheskikh sel'skokhozyaystvennykh predpriyatii Kishinevskogo sel'skokhozyaystvennogo instituta (for Shevchuk). 2. Predsedatel' kolkhoza im. V.I.Lenina Benderskogo rayona (for Bol'foy).
(Bendery District--Collective farms--Finance)

KUFUDAKIS, Charalambos, promovany ekonom; RUFERT, Svatopluk, dr.;
STERNBERG, Jaroslav

Use of the involved work units in the enterprise management.
Prum potravin 13 no.4:176-177 Ap '62.

1. Vyzkumny ustav potravinarskeho prumyslu, Praha.

KUFYREVA, N.S. J
Country : USSR
Category : Soil Science. Soil Genesis and Geography.

Abs. Jour.: Ref. Zhur.-Biologiya No. 11, 1953, No. 48586

Author : Kufyreva, N.S.
Institute : Moskovskaya Oblast Pedagogical Institute
Title : The Soil and Plant Cover of Abkhazskaya ASSR

Orig. Pub.: Uch. zap. Mosk. obl. ped. in-t, 1956, 47, 121-166

Abstract : In Abkhaziya the following soil and plant zones can be differentiated: 1) the bog and podzolic soil zone (0 - 110 meters above sea level), 2) the foothill zone with yellow or red soils (50-100 to 300-500 meters above sea level), 3) the mountain-forest soil zone, with the following subzones: the gray-brown soil of the lower belt of deciduous forests (300-400 to 1000-1200 meters)

Card: 1/3

Country : USSR J
Category : Soil Science. Soil Genesis and Geography.

Pub. Year : 1958. Zhur.-Biologiya No. 11, 1958. No. 48586

Author :
Institute :
Title :

Orig. Pub.:

Abstract : and the mountain-podzol soils of the upper belt of coniferous forests (1000-1200 to 1800-2000 m. above sea level), 4) mountain meadow soil zone with the following subzones: subalpine mountain meadow soils (1800-2500 m above sea level), alpine mountain meadow soil (2000-3000 m above sea level), rocky outcrops and primitive soils (2400-3000 m above sea level). The conditions of soil

Card: 2/3

FADEYEV, V.I., inzh.; KUGAKOV, G.M., inzh.

Rational designs of the metal molds used in the production of
wall industrial panels made from cellular concrete. Trudy
BashNIISTroi no.1:242-248 '62. (MIRA 17:3)

KUGAL', B.V.

Reliability and serviceability of tractors. Trakt. i sel'khoz mash.
no.7:1-4 J1 '64. (MIRA 18:7)

1. Gosudarstvennyy soyuznyy nauchno-issledovatel'skiy traktorny institut.

KUGARO, F.S., inzh.-mekanik

Snow slinger mounted on a track motorcar. Put' i put.khoz. 6
no.11844-45 '62. (MIRA 16:1)

1. Zelenogorskaya distantiya puti Oktyabr'skoy dorogi.
(Railroads--Snow protection and removal)

Кугаро, Ю. В.

CHERNOMORDIK, P.M.; VISHEVNIK, B.Z.; VOLKOVA, A.G.; MOSKVINA, R.I.;
KUGARO, YU.V.; BAVAL'SKAYA, N.M.

Clinical treatment with proserine of chronic diseases of the nervous system. Nevropat.psikhiat., Moskva 20 no.1:68-70 Jan-Feb 51.
(GIML 20:6)

1. Of the Nerve Division of the Hospital for Chronic Cases imeni Karl Marks (in consultation with S.N.Davidenkova, Active Member of the Academy of Medical Sciences USSR).

HAZAROV, I.N.; KUGATOVA, G.P.

Synthesis of steroid compounds and related substances. Report no.29. Condensation of isoprene with 1-methyl- Δ^1 -cyclohexene-6-one. Synthesis of cis-1-vinyl-6,9-dimethylhexahydronaphthalene. Izv.AN SSSR. Otd.khim.nauk no.3:480-486 My-Je '55. (MIRA 8:9)

1. Institut organicheskoy khimii im. N.D.Zelinskogo Akademii nauk SSSR

(Isoprene) (Cyclohexene) (Naphthalene)

NAZAROV, I.N.; KUCHEROV, V.F.; KUGATOVA, G.P.

Research in the field of the stereochemistry of cyclic compounds
Report no.8. Condensation of cis-1-vinyl-6,9-dimethyl- Δ^4 -
-cyclohexanol with citraconic anhydride. Izv. AN SSSR. Otd.khim
nauk no.3:487-500 My-Je '55. (MIRA 8:9)

1. Institut organicheskoy khimii im. N.D.Zelinskogo Akademii
nauk SSSR.

(Cyclohexanol) (Citraconic anhydride)

KUGATOVA, G.P.

Distr: 4E2c(j)/4E4j

Condensation of 2,4-dinitrobenzaldehyde with acetone and transformation of products into 2,4-dinitroacetophenone and 2,4-dinitro-1,4-diacetylbenzene in the presence of hydroquinone and hydroquinone have been studied.

dinitrophenylhydrazones (14-6) *trans*-Crotonaldehyde
gave in similar reaction with *trans*-piperylene, 1,6-disubstit-
A. *trans*-hydrobenzoinolide (11.7). B. 75.5 77.4 21.4 1.9264

7/11/64

I. N. NAZAROV, G. P. KUZNETSOVA
lyzed with 18% H₂SO₄ and H₂O₂ at reflux 6 hrs. yielding, resp.:
a-methylbenzohydrobenzoinaldehyde (VIII), b: 56%, m.p. 149°C
(2,4-dinitrophenylhydrazones, m.p. 150°C and 151°C)
hydrobenzoinaldehyde (IX), m.p. 150°C and 151°C
2,4-dinitrophenylhydrazones, m.p. 150°C and 151°C
on direct hydrogenation of I, II, and III, resp. treating 0.5 g
VIII in CHCl₃ with 1 g C₂H₅CO and 0.2 g Pt at 80°C stir-
ring 2 hrs. Yield 0.1 g, m.p. 150°C
2,4-dinitrophenylhydrazones, m.p. 150°C and 151°C
m.p. 148°C (2,4-dinitrophenylhydrazones, m.p. 150°C and 151°C)

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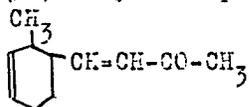
5 (3)

AUTHORS: Nazarov, I. N. (Deceased), Zugatova, SCV/79-23-5-35/75
G. P., Lutsenko, V. V.

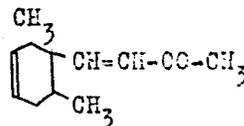
TITLE: Reactions of Some Analogs of β -Ionone With Grignard Reagents
(Reaktsii nekotorykh analogov β -ionona s reagentami Grin'yara)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 5,
pp 1568-1574 (USSR)

ABSTRACT: The authors used organomagnesium compounds with the radicals
methyl, ethyl and phenyl and the ketones



(I)



(II)

Compound (I) was obtained by condensation of 2-methyl- Δ^3 -tetrahydro-benzaldehyde with acetone. The benzaldehyde derivative mentioned was obtained from acrolein and trans-piperylene by heating for two hours up to 180-190° in a metallic ampoule. The ketone (II) was prepared in a way previously described (Ref 1). Both ketones react with the organomagnesium

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Reactions of Some Analogs of β -Ionone With Grignard
Reagents

SOV/79-29-5-35/75

compounds mentioned and yield tertiary alcohols. Whereas β -ionone under the same conditions gives, in addition to the corresponding carbinols, also ketones owing to an abnormal 1,4-addition, these could not be obtained from the ionone analogs I and II. The yield in tertiary alcohols depends on the radical introduced and decreases in the order methyl - phenyl. The hydrogenation of the unsaturated carbinols yielded the corresponding saturated compounds. Further hydrogenation gives hydrocarbons. Both the unsaturated and the saturated alcohols have an agreeable odor which reminds of citral. The experimental part describes the syntheses carried out. Tables present: Table 1: physical data of the unsaturated carbinols, table 2: the same of saturated carbinols, table 3: the same of unsaturated hydrocarbons with conjugated double bonds, table 4: the same of unsaturated hydrocarbons with a double bond, table 5: the same of saturated hydrocarbons. There are 5 tables and 3 references, 2 of which are Soviet.

Card 2/3

Reactions of Some Analogs of β -Ionone With Grignard
Reagents

S07/79-29-5-35/75

ASSOCIATION: Institut Khimii i Khimicheskoy Tekhnologii Akademii Nauk
Lifovskoy SSR (Institute of Chemistry and Chemical
Technology of the Lithuanian SSR)

KUGATOVA, G.P. [Kugatova, G.]; LUTSENKO, V.V. [Lucenko, V.]

Allyl Bromination of some cyclohexenic systems. III. The effect of
N-bromosuccinimide on 4-(2'-methyl - 3'-cyclohexenyl)-butan-3-one-2).
Liet ak darbai B no.1:165-180 '60. (EEAI 9:10)

1. Institut khimii i khimicheskoy tekhnologii AN Litovskoy SSR.
(Bromosuccinimide) (Cyclohexenyl group)
(Allyl group) (Bromination)
(Methylcyclohexenylbutenone)

KUGATOVA, G.P. [Kugatova, G.]; POSHKENE, R.A. [Poshkiene, R.]

Aromatization of 2-methyl-,4-methyl-²-tetrahydrobenzaldehydes.
Liet ak darbai B no.2:157-161 '60. (EEAI 10:1)

1. Institut khimii i khimicheskoy tekhnologii Akademii nauk
Litovskoy SSR
(Aromatization) (Dimethylcyclohexenealdehyde)

S/079/60/030/011/015/026
B001/B055

AUTHORS: Kugatova, G. P., and Vesa, V. S.

TITLE: Synthesis and Investigation of Alicyclic Polyenes. I. Synthesis of Polyenals of the Δ^3 -Cyclohexene Series

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 11, pp. 3731-3738

TEXT: Basing on the publications Refs. 1-8 on the synthesis and chemical properties of polyenes, the authors of the present paper investigated alicyclic polyene compounds of the Δ^3 -cyclohexene series, which had not been studied hitherto and which may be prepared from readily accessible dienes. 4-methyl Δ^3 -tetrahydrobenzaldehyde (I), obtained by diene synthesis from isoprene and acrolein, was used as starting material. The polyene side chain was built up from acetals and vinyl ethers by the known condensation reaction (Refs. 3, 7, 8, 9, and 10). Zinc chloride in ethyl- or butyl acetate was found to be the best catalyst. It was shown that the acetals of 4-methyl Δ^3 -tetrahydrobenzaldehyde can undergo condensation with vinyl ethers, yielding primary condensation products in 12.6 to 19.5% yield. The acetals of aldehydes containing conjugated double bonds
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Synthesis and Investigation of Alicyclic
Polyenes. I. Synthesis of Polyenals of the
 Δ^3 -Cyclohexene Series

S/079/60/030/011/015/026
B001/B055

in the side chain in α, β position give this condensation reaction much more readily, so that the main reaction products are obtained in yields of 80 - 85%. Condensation with vinyl ethers of the diethyl- and dibutyl acetals of 4-methyl Δ^3 -tetrahydrobenzaldehyde, 3-(4'-methyl cyclohexen-3'-yl) 1,1-diethoxy 2-propene, 5-(4'-methyl cyclohexen-3'-yl) 1,1-diethoxy 2,4-heptadiene, and 7-(4'-methyl cyclohexen-3'-yl) 1,1-diethoxy 2,4,6-heptatriene gave the corresponding ether acetals. On boiling the latter with acetic acid, they readily formed the following unsaturated aldehydes: 3-(4'-methyl cyclohexen-3'-yl) 2-propen-1-al, 5-(4'-methyl cyclohexen-3'-yl)-2,4-pentadien-1-al, 7-(4'-methyl cyclohexen-3'-yl) 2,4,6-heptatrien-1-al and 9-(4'-methyl cyclohexen-3'-yl) 2,4,6,8-nonatetraen-1-al. Hydrolysis of 3-(4'-methyl cyclohexen-3'-yl) 1,1,3-triethoxy propene and 3-(4'-methyl cyclohexen-3'-yl) 1,1,3-tributoxy propene gave two isomers, cis and trans, of 3-(4'-methyl cyclohexen-3'-yl) 2-propen-1-al. The UV absorption spectra of the 2,4-dinitro-phenyl hydrazones and semicarbazones of the synthesized Δ^3 -cyclohexenals showed that all the double bonds in

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Synthesis and Investigation of Alicyclic
Polyenes. I. Synthesis of Polyenals of the
 Δ^3 -Cyclohexene Series

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the side chain are conjugated to the aldehyde group. Data on the aldehyde acetals, ether acetals, and aldehydes and their derivatives are given in Tables 1, 2, and 3. Basing on the UV spectra of derivatives of the isomeric aldehydes (VII) it may be assumed that hydrolysis of the ether acetals (IV) and (V) yields the cis-aldehyde (VIIa) as main reaction product (Figs. 1 and 2). Hydrolysis of the ether acetal (IX) leads to aldehyde (X) (Scheme 3). On carrying out all these reactions with aldehyde (X), the authors obtained aldehyde (XIII), and, thence, aldehyde (XVI) (Scheme 4). There are 2 figures, 3 tables, and 13 references; 9 Soviet, 1 US, 1 British, 1 Swiss, and 1 Indian.

ASSOCIATION: Institut khimii i khimicheskoy tekhnologii Akademii nauk
Litovskoy SSR (Institute of Chemistry and Chemical Technology
of the Academy of Sciences Litovskaya SSR)

SUBMITTED: October 3, 1959

Card 3/3

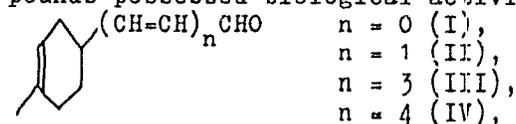
S/079/60/030/011/016/026
B001/B055

AUTHORS: Kuřatova, G. P. and Vesa, V. S.

TITLE: Synthesis and Investigations of Alicyclic Polyenes.
II... Synthesis of Polyenoic Acids and Esters in the
 Δ^3 -Cyclohexene Series

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 11, pp. 3739-3743

TEXT: To supplement their previous paper (Ref. 1), the authors investigated the condensation with malonic acid of the polyenals synthesized by them. By this reaction they obtained the hitherto unknown acids of the Δ^3 -cyclohexene series and esters of these compounds. On the basis of numerous published data it was to be expected that several of these compounds possessed biological activity. Condensation of the aldehydes (I-IV)



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Synthesis and Investigations of Alicyclic
Polyenes. II. Synthesis of Polyenoic Acids
and Esters in the Δ^3 -Cyclohexene Series

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with malonic acid was carried out in pyridine containing a slight amount of piperidine, at 20 - 110°C. To compare the reactivity of the aldehydes containing several double bonds in conjugation to the aldehyde group, the condensation of the above aldehydes was carried out under the same conditions. The presence of these bonds in the initial aldehydes was found to promote the reaction (Ref. 1). Aldehyde (I), e.g., yielded 18% acid, while aldehyde (II) gave 63%. The aldehyde (II) used for condensation was a mixture of its isomers and gave acid (VI), as was to be expected, in two isomeric forms, one crystalline and the other liquid. This was the only case of isomerism among the acids synthesized. On condensation with malonic acid under the same conditions, the aldehydes (III) and (IV) gave many resinous products and very small amounts of the acids (VII) and (VIII). Better yields (56-70%) were only obtained under milder conditions. Esters of these acids were also prepared. Contrary to published data (Ref. 2), the polyenoic acids reacted at low temperatures (-10 - 0°C) with the calculated amounts of diazomethane, giving good yields. The double-bond system remained unchanged in this reaction. The methyl esters (IX - XII)

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Synthesis and Investigations of Alicyclic Polyenes. II . Synthesis of Polyenoic Acids and Esters in the Δ^3 -Cyclohexene Series S/079/60/030/011/016/026 B001/B055

obtained by this reaction, with the exception of (XII), have a higher density, and are viscous, yellowish liquids which can be distilled without decomposition. The acid (VII) (n = 3) and its methyl ester (XII) are analogs of the vitamin A acid and its ester. Except for the acids (VII) and (VIII) (n = 4), which resinify, the acids can be converted into their acid amides. Data on the UV absorption spectra of the acids and esters synthesized are listed in Table 1 and the two figures. They are in good agreement with data published for analogous polyene chains (Ref. 2). There are 2 figures, 2 tables, and 3 references: 2 Soviet and 1 German.

ASSOCIATION: Institut khimii i khimicheskoy tekhnologii Akademii nauk Litovskoy SSR (Institute of Chemistry and Chemical Technology of the Academy of Sciences Litovskaya SSR)

SUBMITTED: October 3, 1959

Card 3/3

KUGATOVA, G. P.

81860

S/020/60/133/02/32/068
B016/B060

5.3400

AUTHORS: Kugatova, G. P., Laumyanskas, G. A., Krasil'nikova, G. K.,
Mozolis, V. V., Kal'velite, V. I.

TITLE: Synthesis and Conversions of Monocyclic Secondary
Acetylene Alcohols ¹

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 2,
pp. 367-369

TEXT: The authors studied secondary acetylene alcohols of the types I-VII, which are synthesized from acetylene and from Δ^3 -cyclohexene aldehydes VIII-XV. The latter can be readily produced by condensation of easily available dienes and dienophiles. Such alcohols are used by the authors for the synthesis of cyclo-aliphatic polyene systems as resemble natural substances in their structure. The latter process is brought about by the hydration of the acetylene bond in the alcohols investigated. The next step is the conversion to ketols and tertiary acetylene glycols, or secondary acetylene alcohols are isomerized to

LH

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Synthesis and Conversions of Monocyclic
Secondary Acetylene AlcoholsS/020/60/133/02/32/068
B016/B060

α,β -unsaturated aldehydes and -ketones, and subsequently, a polyene side chain is added (see Scheme). The reactivity of acetylene alcohols had to be systematically studied, since there were no data available on the alcohols of the series selected by the authors. In this connection they succeeded in following up the influence of structural factors upon the properties of these very alcohols as well as of the intermediate compounds formed in the later structural stages of the complex cyclo-polyene systems.

Alcohols I-VII were synthesized from the Δ^3 -cyclohexene aldehydes XIII-XIV in the presence of sodium in liquid ammonia at -40 to -70°C . The initial aldehydes VIII-XV were produced by the diene condensation of acrolein, of crotonaldehyde and cinnamaldehyde with butadiene piperylene, 2-methyl butadiene, and 1-phenyl butadiene. The condensation took place at 160 - 200°C in the presence of hydroquinone in a metallic ampul. The yields of secondary monocyclic acetylene alcohols amount to at most 30-60% and are largely dependent on the structure of the aldehyde used. However, no such influence is observed as would arise from the character or from the position of the substituents in the hydrogenated analogs of Δ^3 -cyclohexane aldehydes. They all form secondary acetylene alcohols very readily

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Synthesis and Conversions of Monocyclic Secondary Acetylene Alcohols

S/020/60/133/02/32/068
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and with a high yield. Next, the authors describe the conditions of hydrogenation and hydration of primary and secondary (I-VII) acetylene alcohols, and specify the resulting products. Finally, the dehydration of saturated alcohols XXIII-XXVII and XXIX converted to ethylene hydrocarbons XXXVII-XLII is discussed. The dehydration of secondary acetylene alcohols proceeds in another direction under equal conditions: alcohols XVI, XVII, XX, and XXII form ethers XLIII-XLVI in a good yield. Table 1 supplies the results obtained from the above reactions. There are 1 table and 6 references: 3 Soviet, 1 American, and 1 French. W

ASSOCIATION: Institut khimii i khimicheskoy tekhnologii Akademii nauk LitSSR (Institute of Chemistry and Chemical Technology of the Academy of Sciences Litovskaya SSR)

PRESENTED: February 29, 1960, by M. I. Kabachnik, Academician

SUBMITTED: February 26, 1960

Card 3/3

KUGATOVA, G.P.; LUTSENKO, V.V.

Allyl bromination of compounds of the cyclohexene series. Dokl. AN
SSSR 134 no.3:599-602 S '60. (MIRA 13:9)

1. Institut khimii i khimicheskoy tekhnologii Akademii nauk LitSSR.
Predstavleno akad. M.I. Kabanikom.
(Cyclohexene) (Bromination)

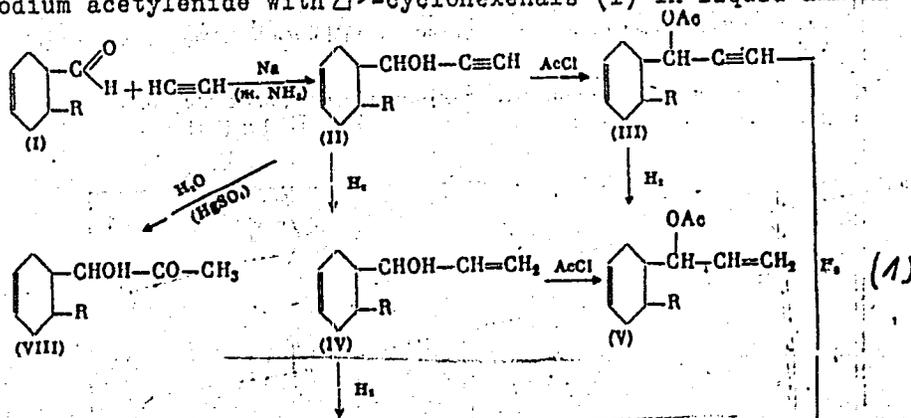
S/079/61/031/002/015/019
B118/B208

AUTHORS: Kugatova, G. P., Mozolis, V. V., and Alaune, Z. B.

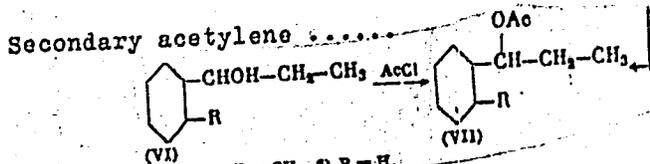
TITLE: Secondary acetylene alcohols of the Δ^3 -cyclohexene series, and some of their conversions

PERIODICAL: Zhurnal obshchey khimii, v. 31, no. 2, 1961, 604-610

TEXT: Secondary acetylene alcohols were obtained in good yields by condensation of sodium acetylenide with Δ^3 -cyclohexenals (I) in liquid ammonia



S/079/61/031/002/015/019
B118/B208



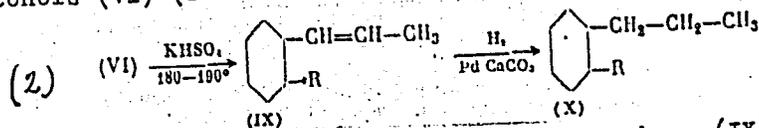
In addition to the corresponding acetylene alcohols (II), always a nitrogen-containing product results in this reaction whose quantity may be reduced by adding large quantities of liquid ammonia, and by using dimethoxy methane as solvent for the aldehyde. The structures of the products synthesized were confirmed by their infrared spectra in the range 900-4000 cm^{-1} , as well as by their properties and conversions. Acetylene alcohols (II) are easily hydrogenated to the corresponding saturated alcohols (VI) with the palladium catalyst; by hydrogenation with one mole of hydrogen, diene alcohols (IV) are formed. The precise selective hydrogenation of the initial acetylene alcohol (II), and the infrared spectrum of the resultant diene alcohol (IV) (absence of absorption bands of the stretching vibrations $\text{C}=\text{C}$ and $=\text{C}-\text{H}$, appearance of a new band at 1625 cm^{-1} characteristic of the $\text{C}=\text{C}$ bond) indicate the presence of a double bond in the side chain of the latter. Hydration of secondary acetylene alcohols (II) according to Kucherov usually gives the corresponding ketols (VIII) in sufficiently

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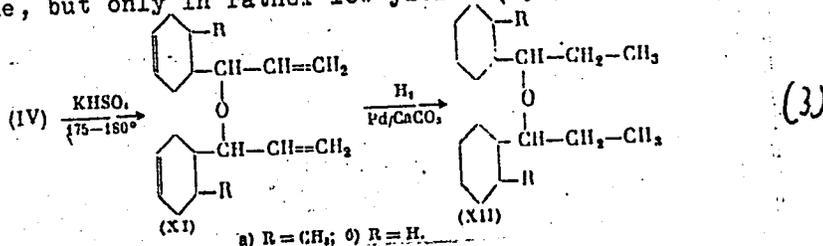
S/079/61/031/002/015/019
B118/B208

Secondary acetylene

high yields. Dehydration with bisulfite usually takes place only with saturated alcohols (VI) (see Scheme 2)



Heating them to 180-190°C gave the unsaturated hydrocarbons (IX). Dehydration of the diene alcohols (IV) with potassium bisulfite at 175-180°C yielded the unsaturated ethers (XI) which absorbed 4 moles H₂ on hydrogenation (Pd/CaCO₃), and gave the saturated ethers (XII). Acetylene alcohols (II) cannot be dehydrated under these conditions. Dehydration of acetylene (II) and diene alcohols (IV) was possible only with phosphorus oxychloride in pyridine, but only in rather low yields (by-products) (Scheme 3).



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Secondary acetylene ...

Dehydration of acetylene alcohols mainly occurs in one direction without isomerization of multiple bonds. The principal products are compounds (XIII) whose structure was confirmed by spectrum analysis. Dehydration of diene alcohols (IV) takes place in a similar manner, without isomerization. Compound (XIV) is obtained as the principal product. The resultant unsaturated hydrocarbons (XIII) were selectively hydrogenated to hydrocarbons (XIV) (by means of Pd/CaCO₃), which gave the saturated hydrocarbons (X) on exhaustive hydrogenation (Table). There are 1 figure, 1 table, and 4 references: 4 Soviet-bloc and 4 non-Soviet-bloc.

SUBMITTED: October 16, 1959

Card 4/4

KUGATOVA-SHEMYAKINA, G.P.; VESA, V.S.

Dehydration of cycloaliphatic α -ketols of the cyclohexane and Δ^3 -cyclohexene series. Dokl. AN SSSR 140 no.2:377-380 5 '61. (MIRA 14:9)

1. Institut khimii i khimicheskoy tekhnologii AN Litovskoy SSR.
Predstavleno akademikom M.I.Kabachnikom.
(Ketols)

KUGATOVA-SHEMYAKINA, G.P.; LAUMYANSKAS, G.A.; KRASIL'NIKOVA, G.K.; VIDUGIRENE, V.I.

Synthesis and properties of cyclohexane and cyclohexene alcohols
of the $RCHOHC\equiv CH$ type. Zhur.ob.khim. 32 no.8:2449-2455 Ag '62.
(MIRA 15:9)

(Alcohols) (Cyclohexane) (Cyclohexene)

KUGATOVA-SHEMYAKINA, G.P.; LAUMYANSKAS, G.A.; KRASIL'NIKOVA, G.K.;
MOZOLIS, V.V.; KAYKARIS, P.A.; POSHKENE, R.A.

Ethynylation of ionone analogs. Zhur.ob.khim. 32 no.8:2455-2461
Ag '62. (MIRA 15:9)

(Ionone) (Ethynylation)

KUGATOVA-SHEMYAKINA, G.P.; POSHKENE, R.A.

Synthesis of Δ^6 -cyclohexene-aldehydes from isomeric Δ^3 -aldehydes.
Zhur.ob.khim. 32 no.8:2461-2464 Ag '62. (MIRA 15:9)
(Benzaldehyde)

KUGATOVA-SHEMYAKINA, G. P.

"A New Method of Determining the Configuration of β -Cyclohexene Compounds and Specificities of Their Conformation".

Report presented at the 19th International Congress Of Pure And Applied Chemistry, London, 10-17 July 1963.

KUGATOVA-SHEMIKINA, G. P.; NIKOLAYEV, G. M.

"The supra-annular effect in cyclohexenic compounds."

Report presented for the 3rd Intl. Symposium on the Chemistry of
Natural Products (IUPAC), Kyoto, Japan, 12-18 April 1964.

BOGDANOVA, A.V.; KUGATOVA-SHEMYAKINA, G.P.; VOLKOV, A.N.; ARAKELYAN, V.G.

Synthesis of diacetylenic alcohols, glycols, and their derivatives
based on diacetylene. Izv.AN SSSR. Ser.khim. no.1:174-176 Ja
'64. (MIRA 17:4)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

KUGATOVA-SHEMYAKINA, G.P.; VESA, V.S.

Dehydration of cycloaliphatic α -ketols of the cyclohexane and
 Δ^3 -cyclohexene series. Zhur.ob.khim. 33 no.12:3875-3883 D
'63. (MIRA 17:3)

1. Institut khimii i khimicheskoy tekhnologii AN Litovskoy SSR.

KUGATOVA-SHEMYAKINA, G.P.; LUTSENKO, V.V.

Allyl bromination of the methyl ester of 2-methyl- Δ^3 -tetra-
hydroxybenzoic acid. Zhur.ob.khim. 33 no.12:3883-3887 D '63.
(MIRA 17:3)

1. Institut khimii i khimicheskoy tekhnologii AN Litovskoy SSR.